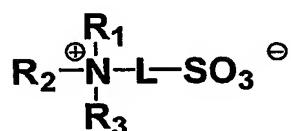


CLAIMS

1. An ink for inkjet printing, which comprising:
at least one of water and a water-miscible organic solvent;
a dye; and
a compound represented by formula (A):

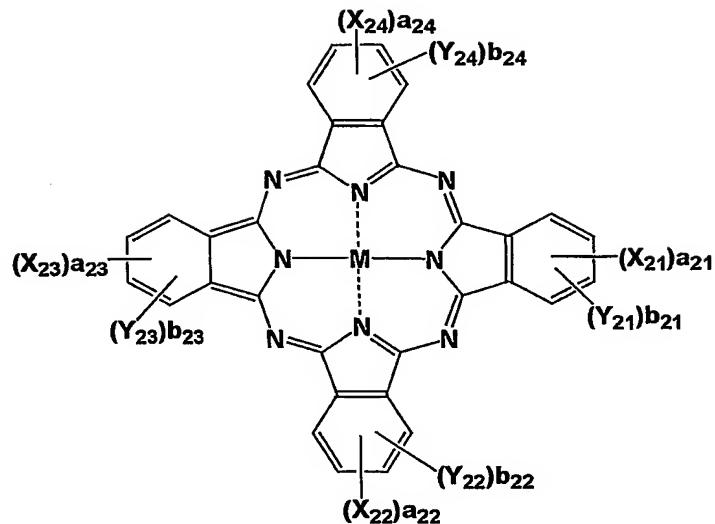


wherein R_1 , R_2 and R_3 each represents an alkyl group, an aryl group or a heterocyclic group, and at least two of R_1 , R_2 and R_3 are mutually connected to form a cyclic structure; L represents a divalent connecting group; and at least one of R_1 , R_2 , R_3 and L is a group having 8 or more carbon atoms.

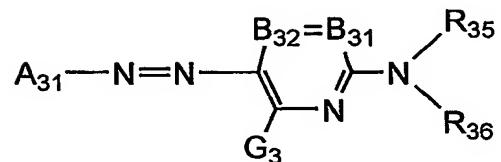
2. The ink for inkjet printing according to claim 1, wherein the dye is at least one selected from the group consisting of dyes represented by formulae (1) to (4):

formula (1): $(\text{A}_{11}-\text{N}=\text{N}-\text{B}_{11})_n-\text{L}$

formula (2) :



formula (3) :



formula (4) : $A_{41}-N=N-A_{42}-N=N-A_{43}$

wherein in formula (1) ,

A_{11} and B_{11} each independently represents a heterocyclic group that may be substituted;

n represents 1 or 2; and

L represents a hydrogen atom, a monovalent substituent, a single bond or a divalent connecting group,

wherein when n is 1, L represents a hydrogen

atom or a monovalent substituent and A_{11} and B_{11} are both monovalent heterocyclic groups; and

when n is 2, L represents a single bond or a divalent connecting group, A_{11} represents a monovalent heterocyclic group and B_{11} is a divalent heterocyclic group;

in formula (2),

X_{21} , X_{22} , X_{23} and X_{24} each independently represent $-SO-Z_2$, $-SO_2-Z_2$, $-SO_2NR_{21}R_{22}$, a sulfo group, $-CONR_{21}R_{22}$, or $-COOR_{21}$, wherein Z_2 independently represents an alkyl group, a cycloalkyl group, an alkenyl group, an aralkyl group, an aryl group or a heterocyclic group, each of which may be further substituted; and R_{21} and R_{22} each independently represents a hydrogen atom, an alkyl group, a cycloalkyl group, an alkenyl group, an aralkyl group, an aryl group or a heterocyclic group, each of which may be further substituted;

Y_{21} , Y_{22} , Y_{23} and Y_{24} each independently represents a monovalent substituent;

a_{21} , a_{22} , a_{23} and a_{24} represent the number of X_{21} 's, X_{22} 's, X_{23} 's and X_{24} 's, respectively, and each independently represents a number of 0 to 4, provided that all of a_{21} , a_{22} , a_{23} and a_{24} are not 0 at the same time, wherein when any of a_{21} , a_{22} , a_{23} and

a_{24} is 2 or more, a plurality of X_{21} 's, X_{22} 's, X_{23} 's and X_{24} 's is mutually the same or different;

b_{21} , b_{22} , b_{23} and b_{24} represent the number of Y_{21} 's, Y_{22} 's, Y_{23} 's and Y_{24} 's, respectively, and each independently represents a number of 0 to 4, wherein when any of b_{21} , b_{22} , b_{23} and b_{24} is 2 or more, a plurality of Y_{21} 's, Y_{22} 's, Y_{23} 's and Y_{24} 's is mutually the same or different; and

M represents a hydrogen atom, a metal atom, a metal oxide, a metal hydroxide or a metal halide; in formula (3),

A_{31} represents a 5-membered heterocyclic ring;

B_{31} and B_{32} each represents $=CR_{31}-$ or $-CR_{32}=$, or either one of B_{31} and B_{32} represents a nitrogen atom while the other one represents $=CR_{31}-$ or $-CR_{32}=$;

R_{35} and R_{36} each independently represents a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, an acyl group, an alkoxy carbonyl group, an aryloxy carbonyl group, a carbamoyl group, an alkylsulfonyl group, an arylsulfonyl group, or a sulfamoyl group, each of which may further have a substituent;

G_3 , R_{31} and R_{32} each independently represents a hydrogen atom, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano

group, a carboxyl group, a carbamoyl group, an alkoxy carbonyl group, an aryloxycarbonyl group, a heterocyclic oxycarbonyl group, an acyl group, a hydroxy group, an alkoxy group, an aryloxy group, a heterocyclic oxy group, a silyloxy group, an acyloxy group, a carbamoyloxy group, an alkoxy carbonyloxy group, an aryloxycarbonyloxy group, an amino group, an arylamino group, a heterocyclic amino group, an acylamino group, an ureido group, a sulfamoylamino group, an alkoxy carbonylamino group, an aryloxycarbonylamino group, an alkylsulfonylamino group, an arylsulfonylamino group, a heterocyclic sulfonylamino group, a nitro group, an alkylthio group, an arylthio group, an alkylsulfonyl group, an arylsulfonyl group, a heterocyclic sulfonyl group, an alkylsulfinyl group, an aryl sulfinyl group, a heterocyclic sulfinyl group, a sulfamoyl group, a sulfo group or a heterocyclic thio group, each of which may be further substituted; and

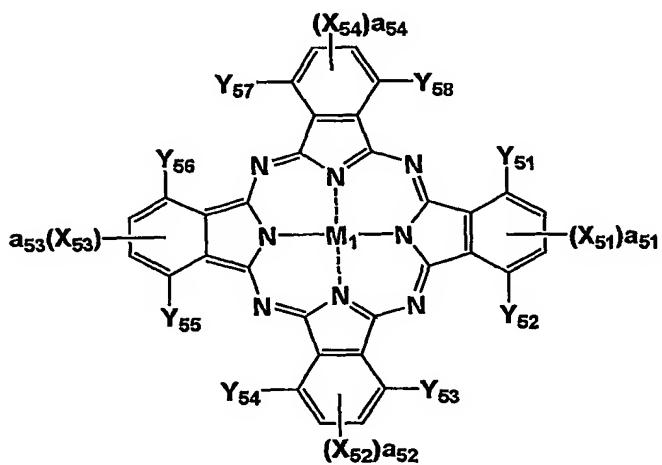
R_{31} and R_{35} , or R_{35} and R_{36} may be bonded to form a 5- or 6-membered ring; and

in formula (4),

A_{41} , A_{42} and A_{43} each independently represents an aromatic group or a heterocyclic group, each of which may be further substituted; A_{41} and A_{43} are

monovalent groups, while A_{42} is a divalent group.

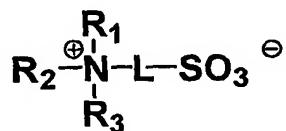
3. The ink for inkjet printing according to claim 2, wherein the dye represented by formula (2) is a dye represented by formula (5):



wherein X_{51} , X_{52} , X_{53} , X_{54} , and M_1 have the same meaning as X_{21} , X_{22} , X_{23} , X_{24} , and M in formula (2), respectively; Y_{51} and Y_{52} have the same meaning as Y_{21} in formula (2); Y_{53} and Y_{54} have the same meaning as Y_{22} in formula (2); Y_{55} and Y_{56} have the same meaning as Y_{23} in formula (2); Y_{57} and Y_{58} have the same meaning as Y_{24} in formula (2); and a_{51} , a_{52} , a_{53} and a_{54} each independently represents an integer 1 or 2.

4. An ink set for inkjet printing, which comprises an ink according to any one of claims 1 to 3.

5. An inkjet recording material, which comprises:
a substrate; and an ink receptive layer on the substrate,
wherein the ink receptive layer includes a compound
represented by formula (A):



wherein R_1 , R_2 and R_3 each represents an alkyl group, an aryl group or a heterocyclic group, and at least two of R_1 , R_2 and R_3 are mutually connected to form a cyclic structure; L represents a divalent connecting group; and at least one of R_1 , R_2 , R_3 and L is a group having 8 or more carbon atoms.

6. The inkjet recording material according to claim 5, wherein the ink receptive layer further contains a water-soluble resin.

7. The inkjet recording material according to claim 6, wherein the water-soluble resin is at least one selected from the group consisting of a polyvinyl alcohol resin, a cellulose resin, a resin including an ether bond, a resin including a carbamoyl group, a resin including a carboxyl group, and a gelatin.

8. The inkjet recording material according to claim 6 or 7, wherein the ink receptive layer includes a crosslinking agent capable of crosslinking the water-soluble resin.

9. The inkjet recording material according to any one of claims 5 to 8, wherein the ink receptive layer further includes a fine particle.

10. The inkjet recording material according to claim 9, wherein the fine particle is at least one selected from the group consisting of a fine silica particle, a colloidal silica, a fine alumina particle and a pseudo-boehmite.

11. The inkjet recording material according to any one of claims 5 to 10, wherein the ink receptive layer further includes a mordant agent.

12. The inkjet recording material according to any one of claims 5 to 11, wherein the ink receptive layer is a cured layer formed by:

applying a first solution on a substrate to form a coating layer, the first solution containing a fine

particle, a water-soluble resin, and a crosslinking agent; and

applying a second solution on the coating layer, the second solution having a pH of 8 or more, so that the coating layer is cured by a crosslinking reaction to form the cured layer,

wherein the applying of the second solution is performed one of:

(1) at the same time as the applying of the first solution; and

(2) in the course of drying the coating layer and before the coating layer starts to show a falling drying rate.

13. An inkjet recording method, which comprises discharging a droplet of an ink according to any one of claims 1 to 3 on an inkjet recording material, so as to form an image or a character.

14. An inkjet recording method, which comprises discharging a droplet of an ink on an inkjet recording material according to any one of claims 5 to 12, so as to form an image or a character.

15. An inkjet recording method according to claim

14, wherein at least one ink contains a betaine compound.

16. The inkjet recording method according to claim 15, wherein the betaine compound is a compound represented by formula (A) according to claim 5.

17. The inkjet recording method according to claim 15, wherein at least one ink is an ink according to any one of claims 1 to 3.

18. A method for producing an inkjet recording material, which comprises:

applying a first solution on a substrate to form a coating layer, the first solution containing a fine particle, a water-soluble resin, and a crosslinking agent; and

applying a second solution on the coating layer, the second solution having a pH of 8 or more, so that the coating layer is cured by a crosslinking reaction to form a ink receptive layer,

wherein the applying of the second solution is performed one of:

(1) at the same time as the applying of the first solution; and

(2) in the course of drying the coating layer and

before the coating layer starts to show a falling drying rate.